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CATALOGUE OF TYPE SPECIMENS
IN THE INVERTEBRATE
PALEONTOLOGICAL COLLECTIONS OF THE
MUSEUM OF COMPARATIVE ZOOLOGY
ARTHROPODA
(Trilobita, Arachnida and Insecta excluded)

BY W. D. IAN ROLFE

WITH ONE PLATE

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No. 7—*Catalogue of Type Specimens in the Invertebrate Paleontological Collections of the Museum of Comparative Zoology*
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PREFACE

The award in 1958 by the National Science Foundation of a facilities grant to the Museum of Comparative Zoology has made possible great improvements in the housing and cataloguing of the collections of fossil invertebrates. Dr. W. D. Ian Rolfe came to the Museum in 1961, and has spent more than a year in curatorial work on parts of the arthropod collections. A most welcome outcome of his work is this catalogue, which is the first to be prepared for publication on any of the fossil invertebrate groups in the Museum. Excluded from it are Trilobita, the largest part of the arthropod collections, for which a separate catalogue is in preparation. Fossil arachnids and insects are in the care of the curators of Arachnology and Fossil Insects, respectively, and are therefore omitted. Few specimens in the groups studied by Dr. Rolfe had previously been catalogued, and it is hardly surprising that his work reveals the whereabouts of a number of long-lost and important types. It is hoped that this catalogue may be the first of a series which will make known more widely and clearly the importance of the Museum's collections of fossil invertebrates.

H. B. WHITTINGTON,
Curator of Invertebrate Paleontology

INTRODUCTION

A general survey of the contents of the invertebrate paleontological collections in the Museum of Comparative Zoology was prepared by P. E. Raymond (1936) for the Tercentennial of the Founding of Harvard College. Details of accessions are published in the Annual Reports of the Director of the Museum. The extra-New England type specimens obtained by exchange with the Boston Society of Natural History between 1914 and 1934 are also given in Cushman's catalogue (1907). Accession lists of specimens originally in the Boston Society's museum can be found listed under "Donations to the Cabinet" and in the curators' annual reports in volume 1 of the Boston Journal of Natural History (1837), volumes 36 and 38 of the American Journal of Science (1839, 1840), and subsequently in the Proceedings of the Boston Society of Natural History. The Eser Collection, secured "by a lucky accident" (Hyatt, 1874, p. 4) for the Boston Society in 1873, was catalogued by Reuss (1850). This publication is rare, however, and although most of the specimens listed are not otherwise mentioned in the literature they will be indexed here for convenience. The "Catalogue des fossiles du Système Silurien du Centre de la Bohême de la collection du défunt J. M. von Sehary à Prague," published by Rohlíček and Sievers at Prague (no date), lists 645 specimens under 58 species of non-trilobite arthropods (p. 14). This collection was purchased for the Museum by Alexander Agassiz in 1882; entries in that catalogue are not indexed here, however.

Explanation of entries. Genera and species are listed alphabetically under genus within the suprageneric groups listed in the Contents. Entries are made under the most up-to-date combination of specific and generic names known to the writer but previous combinations *used in referring to the specimen* are given as cross-references. Thus, complete synonymies are not attempted. Abbreviations, terminology, and usage are those established by R. C. Moore in the Editorial Preface to volumes of the "Treatise on Invertebrate Paleontology."

Citation of authors following the binomen on the first line of each entry follows Recommendation 51B of the 1961 International Code of Zoological Nomenclature. If a specimen is the holotype, or specimens are the syntypes, of the type species of a genus, this is indicated by OD if by original designation, or by SD if by subsequent designation. The author and page number for the subsequent designation are also given.

The second line gives the geological horizon and locality, with the style as on pages xviii to xxiii of Treatise volumes I and Q.

Subsequent lines indicate whether the specimen is a holotype, paratype, syntype, lectotype or paralectotype, by obvious abbreviations. In addition, "hypotype" material has been differentiated into FIGD, if referred to and figured, or REFD, if only referred to in the literature. If a figured specimen was referred to prior to the publication in which it was first figured, such references are given after the reference containing the figure. Different references to the same specimen are separated by semicolons and the name of the author is omitted if the same as in the preceding reference. The Museum of Comparative Zoology Arthropod Catalogue number is separated from the last reference to the specimen by an equal sign. Numbers which follow an oblique stroke indicate different specimens having the same catalogue number. Letters a, b and a/b following the number indicate that the specimen comprises part and counterpart. The name of the collector is given, where known, following the last specimen collected by him within each entry, and preceded by *Coll.*

The opportunity is taken to list arthropods to be figured by the writer in Treatise volume R, since there is no provision in that work for reference to specimen numbers and repositories.

Acknowledgment. The writer is greatly indebted to Professor H. B. Whittington for giving him the opportunity to curate these collections and for much valuable advice and help.

TRILOBITOIDEA

Houghtonites gracilis (Walcott) Raymond

Burgess Sh., M. Cam.; Field, B. C.

FIGD: Raymond, 1931, p. 200-203, pl. 4 fig. 6; 1926, p. 21 = **1811a**. *Coll.* J. D. Houghton. *N.B.* The holotype of the type species is USNM 57661, not MCZ 1811a/b as incorrectly designated by Raymond, 1931, p. 203.

Leanchoilia superlata Walcott

Burgess Sh., M. Cam.; Field, B. C.

FIGD: Raymond, 1935, p. 206-208, 211, 214, fig. 1 = **1843**. P. 206, 209-211, fig. 2 = **1846b**.

REFD: Raymond, 1935, p. 205, 208, 209-213 = **1842, 1844, 1845**. P. 212 ("Another isolated telson . . .") = **4469**. P. 212 ("The telson of still another") = **5965/2**. *Coll.* C. H. Burgess, P. E. Raymond, W. E. Schevill and H. C. Stetson.

Mollisonia gracilis WalcottSee *Houghtonites gracilis***Sidneyia groenlandica** Cleaves in Cleaves and Fox

Ymer F., ?M. Cam.; Ymer I., E. Greenland

HOLO: Cleaves and Fox, 1935, p. 485, pl. 42 fig. 1 = 3225.

Coll. A. B. Cleaves.

Eha (1953, p. 15-16) has suggested that this specimen is a ripple mark and not a fossil.

XIPHOSURA

Anacontium breve Raymond

Wellington F., L. Perm.; Noble Co., Okla.

HOLO: Raymond, 1944, p. 497, fig. 6 = 4726a. *Coll.* F. M. Carpenter.**Anacontium carpenteri** Raymond

OD p. 496

Wellington F., L. Perm.; Noble Co., Okla.

HOLO: Raymond, 1944, p. 496, fig. 5 = 4724a. *Coll.* F. M. Carpenter.PARA: Raymond, 1944, p. 496 = 4725a/b. *Coll.* F. M. Carpenter.**Bellinurus danai** Meek and WorthenSee *Euproops danai*.**Euproops danai** (Meek and Worthen) Meek

Carbondale F., M. Penn.; Mazon Creek, Ill.

REFD: Raymond, 1944, p. 486 = 4673. *Coll.* F. Thompson. Hyatt, 1894, p. 50; Raymond, 1944, p. 486 = 4686a/b. *Coll.* C. E. Beecher.**Euproops darrahi** Raymond

Mason Sh., U. Penn.; Fair Oaks, Pa.

HOLO: Raymond, 1944, p. 489-490, pl. 2 fig. 4 = 4691. *Coll.* W. C. Darrah.**Euproops laticephalus** Raymond

Salem Coal, U. Penn.; Pottsville, Pa.

HOLO: Raymond, 1944, p. 491, fig. 4 = 4692. *Coll.* Leo Lesquereux.**Euproops packardi** Willard and Jones

"Low in Coal Measures," Penn.; Wilkes-Barre, Pa.

REFD: Raymond, 1944, p. 493 = 4693. *Coll.* Leo Lesquereux.**Euproops thompsoni** Raymond

Carbondale F., M. Penn., Wilmington Strip Mine, Ill.

HOLO: Raymond, 1944, p. 486-489, fig. 1; Raymond, 1945, p. 5 = 4669a/b.

PARA: Raymond, 1944, p. 489 = 4670a/b, 4676a/b, 4682a/b.

Coll. F. Thompson, p. 489, fig. 1; Raymond, 1945, p. 5 = **4683a/b**. Raymond, 1944, p. 489, fig. 2; Raymond, 1945, p. 5 = **4684a**. *Coll.* Ward's.

Liomesaspis laevis Raymond OD

Carbondale F., M. Penn.; Mazon Creek, Ill.

HOLO: Raymond, 1944, p. 498-501, fig. 9 = **4698**. *Coll.* Mt. Holyoke College.

PARA: Raymond, 1944, p. 498-501, fig. 7 = **4696a**. P. 501 = **4697**.

Paleolimulus cavitus Dunbar

Wellington F., L. Perm.; S. E. of Elmo, Kans.

FIGD: Raymond, 1944, p. 506, pl. 1 = **4658a**. P. 505, 507, pl. 2 fig. 1 = **4660a**. Pl. 2 fig. 3 = **4661a** (misprinted "4161"). P. 507, pl. 2 fig. 2 = **4662a**.

REFD: Raymond, 1944, p. 505 = **4659**. P. 505-507 = **4664a/b**. P. 506, 507 = **4665a/b** (misprinted "6665"). P. 506 = **4667**. P. 505, 506 = **4668a/b**. *Coll.* F. M. Carpenter.

Prolimulus woodwardi Fritsch

Plate 1, figure 1.

Gaskohle, U. Carb.; Nýřany, Czech.

REFD: Raymond, 1944, p. 504 = **4694**. *Coll.* F. Krantz.

EURYPTERIDA

Adelophthalmus mansfieldi (C. E. Hall) Přibyl

Darlington Sh., M. Penn.; Cannetton, Pa.

REFD: Kjellesvig-Waering, 1948, p. 25-27 (counterpart of USNM 28358) = **5323/27**. P. 26 = **5323/12**. P. 25 = **5323/1-11**, 13-26, 28-31. *Coll.* I. F. Mansfield.

Adelophthalmus mazonensis (Meek and Worthen) Přibyl

Carbondale F., M. Penn.; Wilmington Strip Mine, Ill.

FIGD: Kjellesvig-Waering, 1948, p. 19-20 ("specimen No. 7"), pl. 5 fig. 1 = **7162a**. P. 19-20, pl. 3 fig. 3, pl. 5 fig. 2; Oyen, 1956, p. 43, 79, fig. 27 = **7162b**. *Coll.* H. Luthe.

Carbondale F., M. Penn.; Coal City, Ill.

Kjellesvig-Waering, 1948, p. 19-20, pl. 5 fig. 4 = **7163a**. P. 19-20, pl. 4, pl. 5 fig. 3; Oyen, 1956, p. 43, 80, fig. 27b = **7163b**.

Adelophthalmus sellardsi (Dunbar) Přibyl

Elmo Ls., M. Perm.; Elmo, Kans.

FIGD: Kjellesvig-Waering, 1948, p. 38-42, pl. 7 fig. 1; Raymond, 1932, p. 33; Oyen, 1956, p. 51-52, 72, fig. 20 left = **1852a**. Kjellesvig-Waering, 1948, p. 38-42, pl.

7 fig. 2, 3; Oyen, 1956, p. 51-52, 72, fig. 20 right =
1852b. Coll. F. M. Carpenter.

Ctenopterus? alveolatus Shuler

Bays Ss., M. Ord.; Lyons Gap, Va.

HOLO: Shuler, 1915, p. 551-552, fig. 4 = **1520a.**

PARA: Shuler, 1915, p. 553, fig. 1 (misprinted "fig. 3") =
1519/1. P. 553, fig. 2 = **1519/2.** P. 553, fig. 3 = **1519/3.**
 P. 553, fig. 5 = **1519/4.** P. 553, fig. 6 = **1519/5.** Coll.
 E. W. Shuler.

Lepidoderma mansfieldi (C. E. Hall) Kjellesvig-Waering

See *Adelophthalmus mansfieldi*.

Lepidoderma mazonense (Meek and Worthen) Kjellesvig-Waering

See *Adelophthalmus mazonensis*.

Lepidoderma sellardsi (Dunbar) Kjellesvig-Waering

See *Adelophthalmus sellardsi*.

Stylinurus (Ctenopterus?) alveolatus Shuler

See *Ctenopterus? alveolatus*.

CONCHOSTRACA

Australoleaia acutangularis (Raymond) Novojilov

See *Leaia acutangularis*

Australoleaia ashleyi (Raymond) Novojilov

See *Leaia ashleyi*

Cornia laminata (Raymond) Kobayashi

Wellington F., M. Perm.; Noble Co., Okla.

HOLO: Raymond, 1946, p. 266, pl. 3 fig. 12 (type species of
Pemphicyclus) ; Tasch, 1961, p. 1121, pl. 133 fig. 10
= **4782.**

PARA: Raymond, 1946, p. 266, pl. 4 fig. 1, 2 (fig. 2, \times 15 not
12) ; Tasch, 1961, p. 1121, pl. 133 fig. 2, 7 = **4783-4785**
(slabs). Coll. F. M. Carpenter and G. O. Raasch.

Cyclestherioides blackstonensis (Raymond) Kobayashi

See *Rhabdostichus blackstonensis*

Cyzicus (Euestheria) multicostatus (Emmons)

U. Trias.; Midlothian, Va.

REFD: Raymond, 1946, p. 253 = **4796.** Coll. J. B. Wood-
worth.

Cyzicus (Lioestheria) brevis (Raymond)

Wellington F., M. Perm.; Noble Co., Okla.

HOLO: Raymond, 1946, p. 243-244, pl. 2 fig. 10 (\times 9.7 not 13)
(type species of *Pseudestheria* (*Pseudestheria*) Ray-
mond) = **4798.**

PARA: Raymond, 1946, pl. 2 fig. 9 ($\times 9.0$ not 12) = **4790**.
 P. 244 = **4805**. Coll. F. M. Carpenter and G. O. Raasch.

Cyzicus (Lioestheria) ovatus (Lea)

U. Trias.; Phoenixville, Pa.

REFD: Raymond, 1946, p. 254 = **7451**/1-2 (slabs). Coll. W. B. and H. D. Rogers.

Cyzicus (Lioestheria) ovatus? (Lea)

U. Trias.; Richmond, Va.

REFD: Bulfinch, 1843, p. 149; Rogers, 1843, p. 301 (1884, p. 647) ("Posidonomya keuperi?"); 1854, p. 15 (1884, p. 766) ("cf. Posidonomya bronni") = **7452**/1-11a/b (on slabs with *Spirorbis* sp.). Coll. W. B. and H. D. Rogers.

Cyzicus (Lioestheria) plicifer (Raymond)

Wellington F., M. Perm.; Noble Co., Okla.

HOLO: Raymond, 1946, p. 249, pl. 2 fig. 12 ($\times 7.1$ not 9) = **4791**. Coll. F. M. Carpenter and G. O. Raasch.

Wellington F., M. Perm.; Elmo, Kans.

PARA: Raymond, 1946, p. 249 = **4712**/1-3. Coll. F. M. Carpenter.

Cyzicus (Lioestheria) raaschi (Raymond) Tasch

Wellington F., M. Perm.; Noble Co., Okla.

HOLO: Raymond, 1946, p. 232-233, pl. 1 fig. 4 = **4781**.

PARA: Raymond, 1946, p. 233, pl. 1 fig. 5 ("one slab") = **4807a**. Coll. F. M. Carpenter and G. O. Raasch.

Cyzicus (Lioestheria) rugosus (Raymond)

Wellington F., M. Perm.; Noble Co., Okla.

HOLO: Raymond, 1946, p. 250, pl. 3 fig. 2 ($\times 7.3$ not 6.75) = **4806**. Coll. F. M. Carpenter and G. O. Raasch.

?**Cyzicus** sp. indet.

M. Penn.; Blackstone River, R. I.

FIGD: Haynes, 1913, p. 192, fig. 2; Raymond, 1946, p. 279 ("?scale of a fish") = **7425**.

REFD: Haynes, 1913, p. 192 ("several specimens"); Raymond, 1946, p. 279 = **7426**/1-5. Coll. W. P. Haynes.

Estheria sp. indet. Haynes

See *Cyzicus* sp. indet.

Euestheria multicostata (Emmons) Kobayashi

See *Cyzicus (Euestheria) multicostatus*

Hemicyclolecia acutangularis Raymond

See *Leiaia acutangularis*

Hemicycloleaia ashleyi RaymondSee *Leaia ashleyi***Hemicycloleaia haynesi** RaymondSee *Leaia haynesi***Hemicycloleaia laevis** RaymondSee *Leaia laevis***Hemicycloleaia normalis** RaymondSee *Leaia normalis***Leaia acutangularis** (Raymond) Kobayashi

M. Penn.; Blackstone River, R. I.

HOLO: Raymond, 1946, p. 292, fig. 6; Novojilov, 1956, p. 69-70, fig. 56 = **4802**. Coll. W. P. Haynes.**Leaia ashleyi** (Raymond) Kobayashi

L. Mahoning Ss., U. Penn.; Conemaugh, Pa.

HOLO: Raymond, 1946, p. 288-289, pl. 6 fig. 3 ($\times 5.5$ not 6.67) (misprinted "4792"); type species of *Australoleaia* Novojilov, 1954 (cf. Novojilov, 1956); Novojilov 1956, p. 70 = **4794**. Coll. P. E. Raymond. Novojilov, 1954, fig. 1z is not a paratype.? **Leaia baentschiana** PruvostSee *Leaia haynesi***Leaia haynesi** (Raymond) Kobayashi

M. Penn.; Blackstone River, R. I.

HOLO: Haynes, 1913, p. 192, fig. 1 ("*L. tricarinata* Meek and Worthen"); Pruvost, 1914, p. 260, 272 (= off-print p. 270) ("? *L. baentschiana* Beyrich"); Raymond, 1946, p. 291, pl. 6 fig. 6 ($\times 4.0$ not 1.67); Novojilov, 1954, p. 1243 (type species of *Siberoleaia*); 1956, p. 25-26; Tasch, 1958, p. 1103 = **4803a**.PARA: Raymond, 1946, p. 291; not Novojilov, 1954, fig. 1m ("paratip") = **4801**.REFD: Raymond, 1946, p. 292 = **7450/1-2**. Coll. W. P. Haynes.**Leaia laevis** (Raymond) Kobayashi

L. Mahoning Ss., U. Penn.; Conemaugh, Pa.

HOLO: Raymond, 1946, p. 287, pl. 6 fig. 2 ($\times 4.30$ not 1.5) (type species of *Hemicycloleaia*); Kobayashi, 1954, p. 141; Novojilov, 1956, p. 28-29, fig. 20; 1960, fig. 556 = **4795/1**.PARA: Raymond, 1946, pl. 6 fig. 2 ("below"); not Novojilov, 1954, fig. 1p ("paratip") = **4799**. Coll. P. E. Raymond.

Leiaia normalis (Raymond) Kobayashi

M. Penn.; Blackstone River, R. I.

HOLO: Raymond, 1946, p. 292, pl. 6 fig. 7 ($\times 4.2$ not 2); Novojilov, 1956, p. 63, fig. 49 = **4804b**. Coll. W. P. Haynes.**Leiaia reflexa** RaymondSee *Rostroleiaia reflexa***Lioestheria raaschi** RaymondSee *Cyzicus (Lioestheria) raaschi***Mimoleiaia normalis** (Raymond) NovojilovSee *Leiaia normalis***Monoleiophus conemaughensis** KobayashiSee *Monoleiophus unicostatus***Monoleiophus unicostatus** Raymond [= *M. conemaughensis* Kobayashi (obj.)] OD

L. Mahoning Ss., U. Penn.; Conemaugh, Pa.

HOLO: Raymond, 1946, p. 262, pl. 3 fig. 11; Novojilov, 1954, p. 1241; 1956, p. 18-19, fig. 7; Tasch, 1958, p. 1099, 1102, fig. 26 = **4792**.PARA: Raymond, 1946, p. 262 = **4793, 7453**. Coll. P. E. Raymond.**Palaeolimnadiopsis carpenteri** Raymond OD

Wellington F., M. Perm.; Noble Co., Okla.

HOLO: Raymond, 1946, p. 271, pl. 4 fig. 8, pl. 5 fig. 2; Varentsov, 1955, p. 310-312, pl. fig. 1, 3; Novojilov, 1958, p. 100, fig. 7; Tasch, 1962, p. 820 = **4705a**.PARA: Raymond, 1946, p. 271, pl. 4 fig. 7, pl. 5 fig. 1; Tasch, 1956, p. 1253, fig. 5; 1962, p. 820, pl. 120 fig. 5 = **4789**. Raymond, 1946, p. 271 ("smallest specimen"); Tasch, 1962, p. 820, pl. 120 fig. 6 = **4706a**. Coll. G. O. Raaseh and F. M. Carpenter.**Pemphicyclus laminatus** RaymondSee *Cornia laminata***Posidonia keuperi** Bulfinch [?nom. null. pro *P. keuperina* Hoeninghaus in de la Beeche (nom. nud.)]See *Cyzicus (Lioestheria) ovatus?***Posidonomyia keuperi?** (Bulfinch) RogersSee *Cyzicus (Lioestheria) ovatus?***Pseudestheria blackstonensis** RaymondSee *Rhabdostichus blackstonensis***Pseudestheria brevis** RaymondSee *Cyzicus (Lioestheria) brevis*

Pseudestheria multicostata (Emmons)See *Cyzicus (Euestheria) multicostatus***Pseudestheria plicifera** RaymondSee *Cyzicus (Liocstheria) plicifer***Pseudestheria rugosa** RaymondSee *Cyzicus (Liocstheria) rugosus***Rhabdostichus blackstonensis** (Raymond)

M. Penn.; Blackstone River, R. I.

HOLO: Raymond, 1946, p. 247, 279, pl. 3 fig. 1; Haynes, 1913, p. 192 = **4800**. Coll. W. P. Haynes.**Rostrolecia reflexa** (Raymond) Novojilov

Wellington F., M. Perm.; Noble Co., Okla.

HOLO: Raymond, 1946, p. 286, pl. 6 fig. 1 ($\times 9.5$ not 4); Novojilov, 1956, p. 50, 101, 126, pl. 9 fig. 2 ($\times 7.7$ not 4) = **4711a**. Coll. G. O. Raaseh.**Schizodiscus antecrenulus** Cleaves

Moscow F., M. Dev.; Barnett's Mill, Pa.

HOLO: Cleaves, 1935, p. 6, 8, pl. 2 fig. 5; Willard and Cleaves, 1933, p. 775 = **1982**.PARA: Cleaves, 1935, p. 6, 8, pl. 2 fig. 6 ($\times 4.2$ not 3), 7 ($\times 6.3$ not 5) = **1983, 1984**. Coll. A. B. Cleaves.**Siberolecia haynesi** (Raymond) NovojilovSee *Leaia haynesi*

CLADOCERA

Daphnia fossilis Heyden

Plate 1, figures 2, 3.

Braunkohle, Oligo.; Rott, N. W. Ger.

SYN: Heyden, 1862, p. 62-63, pl. 10 fig. 25; Hagen, 1870, p. 21 = **6292**. Coll. A. Krantz.

OSTRACODA

All of Harris' 1931 and 1957 type and figured ostracods (with the exception of *Eohollina depressa* (Kay), FIGD: Harris, 1957, p. 209, pl. 7 fig. 1a, b = **4599**, lost) are now in the Museum collection (cf. Martinsson, 1960, p. 153). For economy's sake only those species for which MCZ catalogue numbers were not given in Harris, 1957 and 1960a, will be listed here, and only selected references to them given.

Anisocyamus bassleri (Harris) Martinsson

Bromide F., M. Ord.; Arbuckle Mts., Okla.

LECTO: Martinsson, 1960, p. 146, 153; Harris, 1931, p. 92 ("female"), pl. 11 fig. 2a, b, pl. 14 fig. 2a, b; Amsden, 1957, p. 23; Harris, 1960a, p. 180 ("holotype . . . 4593A") = **7441**.

PARAL: Harris, 1931, p. 92 ("male"); 1957, p. 203, pl. 6 fig. 17a, b = **4593**. Harris, 1931, pl. 11 fig. 2e; Martinsson, 1960, p. 146 = **7442**. Harris, 1931, pl. 11 fig. 2d; Martinsson, 1960, p. 146; Harris, 1960a, p. 180 ("paratype . . . 4594A") = **7443**. Coll. R. W. Harris.

Balticella deckeri (Harris) Harris

Bromide F., M. Ord.; Arbuckle Mts., Okla.

HOLO: Harris, 1931, p. 89, pl. 14 fig. 5a-e; 1957, p. 242, pl. 8 fig. 7a-c; Amsden, 1957, p. 22 = **7445**. Coll. R. W. Harris.

"**Beyrichia**" **bella** Walcott

Trenton Ls., M. Ord.; Trenton Falls, N. Y.

HOLO: Walcott, 1883, p. 7 (1884, p. 213), pl. 17 fig. 11, 11a = **6988**. Coll. C. D. Walcott.

Beyrichia chambersi Miller

See *Ceratopsis chambersi*

Beyrichia moodeyi Ulrich and Bassler

See *Velibeyrichia moodeyi*

Beyrichia pennsylvanica Jones

Onondaga Salt Gr., U. Sil.; Penn's Valley, Pa.

SYN: Jones, 1858a, p. 253, pl. 10 fig. 16-18; 1858b, p. 834, fig. 696a-c; Jones and Holl, 1886, p. 347, 357; Jones, 1889, p. 340, footnote; Lesley, 1889, p. 90, fig.; Cushman, 1907, p. 259 = **6975-6977** (on slab 6978). Jones, 1858a, p. 253 = **6979** (slab).

Surgent Gr., M. Sil.; Barre Forge, Pa.

Jones, 1858a, p. 252, 253 ("a few specimens . . . a smooth variety") = **6980-6982** (on slab with *Lepiditria pennsylvanica* 6968). Coll. H. D. and W. B. Rogers.

Cavellina nebrascensis (Geinitz) Kellett

Wabaunsee Gr., U. Penn.; Nebraska City, Neb.

HOLO: Geinitz, 1866, p. 2, pl. 1 fig. 2; Meek 1872, pl. 11 fig. 2; Kellett, 1935, p. 146; Lalicker, 1935, p. 744-745, fig. 1a-c = **4418**.

FIGD: Geinitz, 1866 ("*Cythere cycas* v. Keys."), p. 2, pl. 1 fig. 3; Meek, 1872, pl. 11 fig. 3a = **6957**. Geinitz,

1866, p. 2, pl. 1 fig. 4; Meek, 1872, p. 237, pl. 11 fig. 3b = **4417** (figured by Lalicker, 1935, p. 744-745, fig. 3a-e), **4419** or **6958**/1-2. *Coll.* Jules Marcou.

Ceratoleperditia armata (Walcott) Harris

See *Pteroleperditia armata*

Ceratopsis chambersi (Miller) Ulrich

Cincinnatian, M. Ord.; ?Cincinnati, Ohio

?SYN: Miller, 1874b, p. 234, fig. 27; 1889, p. 534, fig. 975 = **7360**. 1874b, p. 234 = **7361**/1-4 (on slab with 7360), **7365**. *Coll.* C. B. Dyer.

Cryptophyllus magnus (Harris) Levinson

Oil Creek F., M. Ord.; Arbuckle Mts., Okla.

HOLO: Harris, 1931, p. 91, pl. 5 fig. 3a, b; 1957, p. 182; Amsden, 1957, p. 9 = **7444**. *Coll.* R. W. Harris.

Cryptophyllus simpsoni (Harris) Levinson

Bromide F., M. Ord.; Arbuckle Mts., Okla.

HOLO: Harris, 1931, p. 90, pl. 11 fig. 1 a-d, pl. 14 fig. 1a, b; 1957, p. 183, pl. 5 fig. 14a, b; Amsden, 1957, p. 22 = **7447**. *Coll.* R. W. Harris.

Dicranella? byrnesi (Miller) Ulrich

Fulton Beds, U. Ord.; Cincinnati, Ohio

?HOLO: Miller, 1874a, p. 123, fig. 10; 1889, p. 552, fig. 1020 = **7366**. *Coll.* C. B. Dyer.

Dicranella macrocarinata Harris

Bromide F., M. Ord.; Arbuckle Mts., Okla.

HOLO: Harris, 1931, p. 92, pl. 14 fig. 3a, b; 1957, p. 230, pl. 7 fig. 7a, b; Amsden, 1957, p. 22 = **7448**. *Coll.* R. W. Harris.

Elpe radiata (Ulrich) Ulrich in Jones

See *Elpinella radiata*

Elpinella radiata (Ulrich) Přibyl and Šnajdr SD Přibyl and

Šnajdr 1950, p. 128, 171 Plate 1, figure 4.

Utica Sh., M. Ord.; Cincinnati, Ohio

HOLO: Ulrich, 1879, p. 9-10, pl. 7 fig. 2, 2a, b = **6855**. *Coll.* J. Fine, H. E. Dickhaut, and E. O. Ulrich.

Entomis nodosa Burgess

See *Entomozoe nodosa*

Entomis variostriata Clarke

See *Primitia variostriata*

Entomozoe nodosa (Burgess)

Kiln Sh., U. Dev.; Pocahontas, Alberta

LECTO: Burgess, 1931, p. 200-201, fig. 1 = **4467**.

PARAL: Burgess, 1931, p. 201 ("another specimen") = **6959.** *Coll.* C. H. Burgess.

Eoleperditia nana? (Jones) Swain

Birdseye Ls., M. Ord.; Bucks Quarry, N. Y.

REFD: Walcott, 1883, p. 8 (1884, p. 214) ("varieties of *L. canadensis*") = **6985** (slab), **6986, 6987.** *Coll.* C. D. Walcott.

Eridoconcha magna Harris

See *Cryptophyllum magnus*

Eridoconcha simpsoni Harris

See *Cryptophyllum simpsoni*

Isochilina bilabiata Raymond

Highgate Ls., L. Ord.; Highgate, Vermont

HOLO: Raymond, 1937, p. 1128-1129, pl. 4 fig. 4 = **4453.** *Coll.* T. H. Clark.

Isochilina eximia Raymond

Highgate Ls., L. Ord.; Highgate, Vermont

HOLO: Raymond, 1937, p. 1129, pl. 4 fig. 3 = **4454** (on slab with *I. bilabiata* 4453). *Coll.* T. H. Clark.

Isochilina puteata Raymond

Highgate Ls., L. Ord.; Highgate, Vermont

HOLO: Raymond, 1937, p. 1128, pl. 4 fig. 5 = **4452.** *Coll.* T. H. Clark.

Isochilina tenuifilum Raymond

Highgate Ls., L. Ord.; Highgate, Vermont

HOLO: Raymond, 1937, p. 1128-1129, pl. 4 fig. 2 = **4451.** *Coll.* T. H. Clark.

Krausella arcuata Ulrich

Bromide F., M. Ord.; Arbuckle Mts., Okla.

FIGD: Harris, 1931, p. 94, pl. 14 fig. 4 a-e; Amsden, 1957, p. 22 = **7449.** *Coll.* R. W. Harris.

Leperditella? deckeri Harris

See *Balticella deckeri*

Leperditia (Isochilina) armata Walcott

See *Pteroleperditia armata*

Leperditia canadensis Jones var. Walcott

See *Eoleperditia nana?*

Leperditia gibbera var. **scalaris** Jones

See *Leperditia scalaris*

Leperditia ovata Jones

The slab 6972 bearing three leperditiid was identified as Jones' 1858a, p. 252 holotype by Cushman, 1907, p. 260

("'12879"). The specimens are preserved with the matrix-filled, concave inside of the shell exposed, however, and hence these cannot be Jones' types.

Leperditia pennsylvanica Jones

Plate 1, figure 5.

Surgent Gr., M. Sil.; Barre Forge, Pa.

SYN: Jones, 1858a, p. 251-252, pl. 10 fig. 12a, b; 1858b, p. 834, fig. 699 left; Lesley, 1889, p. 90, fig.; Cushman, 1907, p. 260 = **6967** (on slab 6968). Jones, 1858a, p. 251-252 ("specimen of greyish limestone"); 1858b, p. 834 = **6968** (slab with many specimens). Jones, 1858a, p. 252, pl. 10 fig. 13; 1858b, p. 834, fig. 699 right; Lesley, 1889, p. 90, fig.; Cushman, 1907, p. 260 ("12875") = **6969**. Jones, 1858a, p. 252 (fragments with "numerous specimens"); Cushman, 1907, p. 260 ("12875, 12877") = **6970**, **6971**. Coll. H. D. and W. B. Rogers.

Leperditia radiata Ulrich

See *Elpinella radiata*

Leperditia scalaris Jones

Sealent Gr., L. Dev.; Pa.

SYN: Jones, 1858a, p. 250-251, pl. 10 fig. 10a, b; 1858b, p. 834, fig. 698e; Swartz, 1949, p. 313 = **6960**. Jones, 1858a, pl. 10 fig. 11; 1858b, p. 834, fig. 698d = **6961**. Jones, 1858a, p. 251 ("fragment of an individual") = **6962**. P. 251 ("left valve") = **6963**. P. 250 = **6964**, **6965**. Specimens 6960-6965 occur on a slab from Pennsylvania (Jones, 1858a, p. 250-251; 1858b, p. 834; Cushman, 1907, p. 260) and not New York (cf. Jones, 1858a, p. 257; Bassler, 1915, p. 705; Bassler and Kellett, 1934, p. 399; Swartz, 1949, p. 313).

REFD: Jones, 1858a, p. 251 ("A thin seam of hard grey limestone"); 1858b, p. 834; Cushman, 1907, p. 260 ("12878") = **6966**. Coll. H. D. and W. B. Rogers.

Paraschmidtella perforata (Harris) Swartz

Oil Creek F., M. Ord.; Arbuckle Mts., Okla.

HOLO: Harris, 1931, p. 87, pl. 5 fig. 4a, b; Amsden, 1957, p. 9 = **7446**. Coll. R. W. Harris.

Primitia variostrigata (Clarke) Matern

Kiln Sh., U. Dev.; Pocahontas, Alberta

REFD: Burgess, 1931, p. 200 = **4468**/1-7. Coll. C. H. Burgess.

Primitiopsis bassleri HarrisSee *Anisocyanus bassleri***Pteroleperditia armata** (Walcott) Hamada

Birdseye Ls., M. Ord.; Buck's Quarry, N. Y.

SYN: Walcott, 1883, p. 7-8 (1884, p. 213-214), pl. 17 fig. 10;
Wilson and Mather, 1916, pl. 2 fig. 7; Kesling, 1958,
p. 146; Harris, 1960b, p. 212-213 = **6983**.

Black River Ls., M. Ord.; Buck's Quarry, N. Y.

Walcott, 1883, p. 8 (1884, p. 214) = **6984**. *Coll. C. D. Walcott.***Velibeyrichia moodeyi** (Ulrich and Bassler) Henningsmoen

Plate 1, figure 6.

Onondaga Salt Gr., U. Sil.; Penn's Valley, Pa.

FIGD: Jones, 1858a, p. 252-253, pl. 10 fig. 15a, b ("*B. maccoyiana* Jones"); 1858b, p. 834, fig. 695; Jones and Holl, 1886, p. 347, 357 ("*B. pennsylvanica* Jones"); Jones, 1889, p. 340 footnote; Lesley, 1889, p. 90, fig.; Cushman, 1907, p. 259; Ulrich and Bassler, 1908, p. 285 footnote ("*B. moodeyi*"); 1923, p. 655 = **6973** (on slab 6974).REFD: Jones, 1858a, p. 252-253 = **6974** (slab with "numerous individual valves"). *Coll. H. D. and W. B. Rogers.*

CIRRIPEDIA

Balanus gregarius (Conrad) Pilsbry

Bituminous Sh., U. Mio.; Hills N. of Buena Vista Lake, Calif.

FIGD: Gabb, 1869, p. 61-63, pl. 18 fig. 22 = **1829**. *Coll. Gibbes.***Tamiosoma gregaria** ConradSee *Balanus gregarius*

PHYLLOCARIDA

Callizoe bohemica Barrande

U. Koněprusy Ls., L. Dev.; Koněprusy, Czech.

FIGD: Rolfe, [In press] = **6067/6**. *Coll. J. M. von Schary.***Caryocaris raymondi** Ruedemann

Athens Sh., M. Ord.; Clifton Heights, Tenn.

SYN: Ruedemann, 1934, p. 92-93, pl. 23 fig. 1, 2 = **7014**.
P. 92-93, pl. 23 fig. 3 = **7015**.FIGD: Ruedemann, 1934, pl. 23 fig. 4 = **7016**. Pl. 23 fig. 5 =
7017. Pl. 23 fig. 6 = **7018**. *Coll. P. E. Raymond.*

Caryocaris raymondi? Ruedemann

Athens Sh., M. Ord.; Clifton Heights, Tenn.

FIGD: Ruedemann, 1934, pl. 23 fig. 10 = **7019a**; pl. 23 fig. 12 = **7019b**. Pl. 23 fig. 11 = **7020**. Fureal rami, not carapaces (cf. Ruedemann, p. 130). *Coll. P. E. Raymond.*

Ceratiocaris acuminata J. Hall

Bertie Waterlime, U. Sil.; Buffalo, N. Y.

FIGD: Stose, 1894, p. 370-371, 2 figs.; Cushman, 1907, p. 260 = **5997/1**. Stose, 1894, p. 370-371 ("antennae" are tail spines of small individual, probably *C. maccoyana* Hall) = **5997/2**. *Coll. G. W. Stose.*

Ceratiocaris? cornwallensis Copeland

Budňany Beds, U. Sil.; Dvorce, Czech.

FIGD: Rolfe, 1962d, p. 914; 1963, p. 486-487, fig. 1: [In press] = **6095/6**.

REFD: Rolfe, 1963, p. 486 = **6095/12**. *Coll. J. M. von Schary.*

Ceratiocaris noetlingi Schmidt

Ludlovian, U. Sil.; W. Sarema, U.S.S.R.

REFD: Rolfe, 1962d, p. 927 = **7067/1**. *Coll. W. Patten.*

Ceratiocaris papilio Salter in Murchison

Ceratiocaris Beds, M. Sil.; Lesmahagow, Scot.

FIGD: Rolfe, 1962d, p. 917, pl. 129 fig. 2 = **5994/23**. P. 927, pl. 131 fig. 5, 6 = **5993/1b**. P. 927, pl. 132 fig. 3 = **5994/24**. P. 919, pl. 132 fig. 4 = **5994/10**.

REFD: Rolfe, 1962d, p. 914, 917, 919 = **5994/5, 6, 8** (on same slab), **5994/1a/b**, 11-22.

Dithyrocaris paradoxides (de Koninck)

Visé Ls., L. Carb.; Visé, Belg.

FIGD: Rolfe, [In press] = rubber mold of **6025/6**. [In press] = reconstr. based on **6019/2**, **6020**, **6023**, **6024**/2-3a/b, 5-6, **6025/1**, **6027**/2a/b, **6028a/b**, **6029**/3a/b, **6031**/1-3, **6048**. *Coll. L. G. de Koninck.*

Nahecaris stuertzi Jaekel

Hunsrück Sh., L. Dev.; Bundenbach, Ger.

REFD: Raymond, 1932, p. 33; 1935, p. 222-223; Rolfe, [In press] = **7030**. *Coll. T. Barbour.*

Ohiocaris wycoffi Rolfe

Chagrin Sh., U. Dev.; Painesville, Ohio

PARA: Rolfe, 1962a, p. 1, 4-6 = **6556**. *Coll. R. Pritschan.*

Orozoe mira Barrande

U. Koněprusy Ls., L. Dev.; Koněprusy, Czech.

FIGD: Rolfe, [In press] = **6045/26**. *Coll. J. M. von Schary.*

SYNCARIDA

Uronectes fimbriatus (Jordan) Brönn

Rotliegend, L. Perm.; Lebach, Saarland, Ger.

REFD: Rolfe, 1962b, p. 548 = **6061**. Coll. H. G. Brönn.**Palaeocaris canadensis** Brooks

Riversdale Gr., L. Penn.; Cumberland Co., Nova Scotia

HOLO: Copeland in Baird, 1962, p. 27 ("B-13: *Palaeocaris typus?*"); Brooks, 1962, p. 248-250, pl. 65, fig. 1, 2 = **5435**. Coll. D. and L. B. Baird.

The numerous MCZ specimens of non-decapod Eumalacostracea cited by Brooks, 1962, could not be itemized in time for this catalogue. Brooks refers to the MCZ numbers of all specimens he cites, however, so that his work is self explanatory. In curating the specimens concerned it was found that several parts had become separated from and catalogued independently of their respective counterparts. Wherever possible part and counterpart were reunited and renumbered to follow Brooks' 1962 account (available to the writer in thesis form in August, 1962). To remain consistent the following changes should be made to the MCZ numbers cited by Brooks, 1962: p. 180, for 5206 read 5230b; p. 182, for 5224 read ?5229b; p. 236, for 5233 read 5224b; p. 237, pl. 59 fig. 7, for 5224 read 5224a.

DECAPODA

Archaeoplax signifera Stimpson

OD

Greensand Bed, U. Mio.; Gay Head, Mass.

SYN: Stimpson, 1863, p. 583-589, pl. 12 fig. 1-4; Packard, 1900, p. 1, 7; Cushman, 1905, p. 383 = **6489**/1-96, **6490**, **6501**. Coll. A. Ordway. Also **6491**/1-58, **6492**/1-6, **6493**/1-7. Coll. A. Hyatt and N. S. Shaler. Cushman, 1905, pl. 2, fig. 3 = **?6490**.**Eryma minuta** (Schlotheim) Oppel

Lithographic Ls., U. Jur.; Solnhofen, Ger.

REFD: Reuss, 1850, p. 31 ("*Glyphea fuciformis?*") = **6126**. Coll. A. F. Eser.**Eryon arctiformis** (Schlotheim) Brönn

Lithographic Ls., U. Jur.; Solnhofen, Ger.

REFD: Reuss, 1850, p. 31 = **6104**. Coll. A. F. Eser.**Glyphea graticosa** (Meyer) OppelSee *Selenisca graticosa***Grapsus speciosus** MeyerSee *Potamon speciosum*

Harpactocarcinus punctulatus (Desmarest) A. Milne-Edwards

Grobkalk, Eoc.; Verona, N. Italy

FIGD: Meyer, 1862, p. 167-168, pl. 18 fig. 1, 2; Meyer, 1846, p. 463-464 ("*Cancer punctatus*" nom. null.); Reuss, 1850, p. 20 = **6384**. Coll. A. F. Eser.**Harpactocarcinus quadrilobatus** (Desmarest) Bittner

Nummulit, M. Eoc.; Kressenberg, Ger.

FIGD: Meyer, 1862, p. 156-157, pl. 16 fig. 12-14 (HOLO of *Xanthopsis kressenbergensis*); Meyer, 1846, p. 463 (nom. nud.); Reuss, 1850, p. 25; Milne-Edwards, 1863, p. 323-324, pl. 5 fig. 3, 3a; Cushman, 1907, p. 259, 262 = **6383**. Coll. A. F. Eser.**Linuparus (Eolinuparus) kleinfelderri** Rathbun

Drift, U. Cret.; Long Island, N. Y.

FIGD: Rathbun, 1935, p. 35-36, pl. 25 fig. 1, 2; Raymond, 1932, p. 33 = **6255a**; Rathbun, 1935, pl. 25, fig. 3 = mold of **6255b**. Coll. E. H. E. Wing.**Mecochirus longimanatus** (Sehlotheim) Bronn

Lithographic Ls., U. Jur.; Solnhofen, Ger.

REFD: Reuss, 1850, p. 31 ("*Megachirus bajeri*, *M. brevimanus*") = **5897**/1-4. Coll. A. F. Eser.**Mecochirus socialis** (Meyer) Quenstedt

Oxfordthon, U. Jur.; Dettingen, Ger.

?SYN: Meyer, 1841, p. 96; 1847, p. 144-148 = **6244**/1-8. Coll. F. von Mandelsloh, 1840. **6317**/1-3 were not collected by Mandelsloh until 1845, according to the original label, and hence these cannot be syntypes. All purchased from H. G. Bronn, 1859.REFD: Reuss, 1850, p. 44 ("*Glyphaea munsteri*") = **6519**. Coll. A. F. Eser.**Pemphix sueuri** (Desmarest) Meyer

Muschelkalk, M. Trias.; Württemberg, Ger.

REFD: Reuss, 1850, p. 50 = **6269-6274**. Coll. A. F. Eser.**Poicimon speciosum** (Meyer) Rathbun

Molasse, U. Mio.; ?Oeningen, Switz.

REFD: Meyer, 1862, p. 169 ("Einem dritten, weniger deutlichen Exemplar") = **6347**. Coll. A. F. Eser. Specimens **6344-6346** and probably also **6348-6350** were collected by O. Heer and may be those on which Heer's 1865 figures are based (p. 353-358, fig. 207, 208).**Prosopon laeve** Meyer

L. Kimn., U. Jur.; Gundersonhofen, France

REFD: Reuss, 1850, p. 41 ("*Prosopon simplex*") = **3217.**
Coll. A. F. Eser.

Pseudoglyphea aencylochelis (Woodward) Woods

L. Lias, L. Jur.; Lyme Regis, Eng.

PARA: Woodward, 1863, p. 318 = **6266, 6267.** *Coll. J. W. Marder.*

Ranina marestiana König

Nummulit, M. Eoc.; Sonthofen, Ger.

REFD: Reuss, 1850, p. 24 ("*Ranina aldrovandi* (Ranzoni)"
sic) = **6400.** *Coll. A. F. Eser.*

Scaphus aencylochelis Woodward

See *Pseudoglyphea aencylochelis*

Selenisca gratiosa Meyer

OD

Plate 1, figure 8.

Kimm., U. Jur.; Würmlingen, Ger.

HOLO: Meyer, 1847, p. 141-144, pl. 19 fig. 1; Reuss, 1850,
 p. 41 ("Hermann v. Meyer bemerkt brieflich (1846):
 merkwürdig ist es, dass dieser Krebs von jenen des
 Solenhofer Schiefers verschieden sich darstellt. Er
 gehört einem eigenen den Glypheen nahestehenden
 Genus an."); Oppel, 1862, p. 70-72, pl. 18 fig. 1a, b;
 Beurlen, 1928, p. 152-153; Cushman, 1907, p. 261 =
6245. *Coll. A. F. Eser.*

Thelphusa [= *Telphusa*] **speciosa** Meyer

See *Potamon speciosum*

Xanthopsis bruckmanni Meyer, 1862 [= 1845 *nom. nud.*] [= *X.
 hispidiformis* (Schlotheim) A. E. Reuss, *partim* (*nom. oblit.*)]
 Nummulit, M. Eoc.; Sonthofen, Ger.

SYN: Meyer, 1862, p. 153-154, pl. 16 figs. 5-9; Reuss, 1850,
 p. 24; Cushman, 1907, p. 262; Schlosser, 1925, p.
144 = 6413. Meyer, 1862, p. 154-155, pl. 16 fig. 10,
 11; Cushman, 1907, p. 262; Schlosser, 1925, p. 144 =
6414. Meyer, 1862, p. 155 ("eines anderes weib-
 lichen Exemplars"); Schlosser, 1925, p. 144 = **6415.**
Coll. A. F. Eser.

Xanthopsis kressenbergensis Meyer

See *Harpactocarcinus quadrilobatus*

Xanthopsis sonthofenensis Meyer

Nummulit, M. Eoc.; Sonthofen, Ger.

HOLO: Meyer, 1862, p. 159-161, pl. 18 fig. 7-9; Meyer 1846,
 p. 463 (*nom. nud.*); Reuss, 1850, p. 24; Milne-Ed-
 wards, 1863, p. 321-322; Schlosser, 1925, p. 144

(“young *X. bruckmanni*”); Cushman, 1907, p. 259,
262 = **6418.** *Coll.* A. F. Eser.

MYRIAPODA

Euphoberia anguilla Seudder

Carbondale F., M. Penn.; Mazon Creek, Ill.

FIGD: Sendder, 1890a, p. 435-436, pl. 36 fig. 3; 1890b, p. 411-412, pl. 28 fig. 3 = **7431a.** *Coll.* F. T. Bliss.

Euphoberia armigera Meek and Worthen

Carbondale F., M. Penn.; Mazon Creek, Ill.

FIGD: Scudder, 1882a, p. 143, 160, 165-167, pl. 13 fig. 7; Lacoe, 1883, p. 17; Seudder, 1890b, p. 195, 212, 217-219, pl. 10 fig. 7 = **7432a.** *Coll.* F. T. Bliss.

Palaeocampa anthrax Meek and Worthen

Carbondale F., M. Penn.; Mazon Creek, Ill. Plate 1, figure 7.

FIGD: Scudder, 1883, p. 283-284, 294-295, pl. 26 fig. 5, 8, 9; 1882b, p. 161-162; Lacoe, 1883, p. 19; Seudder, 1890b, p. 247-248, 258-259, pl. 12 fig. 5, 8, 9 = **7430a.** Sendder, 1885, p. 726, fig. 894a; 1887, p. 725, fig. 911a; Nicholson and Lydekker, 1889, p. 583, fig. 438; Lesley, 1889, p. 579, fig. = **7430b.** *Coll.* F. T. Bliss.

Xylobius cf. frustulentus Scudder

See *Xyloiulus bairdi*

Xylobius spp.

See *Xyloiulus* spp.

Xyloiulus bairdi Hoffman

U. Freeport Coal, M. Penn.; Linton, Ohio.

HOLO: Hoffman, 1963, p. 171-172, pl. 24 fig. 2, 3; Baird, 1958, p. 239-240 (*Xylobius* cf. *frustulentus*) = **5268a/b.**

PARA: Baird, 1958, p. 239-240; Hoffman, 1963, p. 171-172 = **5320, 5321a/b.** *Coll.* D. and L. B. Baird.

Xyloiulus cf. frustulentus (Sendder) Cooke in Cooke and Collins.

See *Xyloiulus bairdi*.

Xyloiulus spp.

Morien Gr., M. Penn.; Florence, Nova Scotia

REFD: Baird, 1958, p. 240 = **5448-5450.** *Coll.* A. Lewis field party.

Arroyo Gr., L. Perm.; Coffee Creek, Texas

REFD: Baird, 1958, p. 239 = **5451.** *Coll.* A. S. Romer field party.

INCERTAE SEDIS

Anomalocaris canadensis Whiteaves

Burgess Sh., M. Cam.; Field, B. C.

FIGD: Rolfe, [In press] = **5976**. *Coll. C. H. Burgess, P. E. Raymond, W. E. Schevill, and H. C. Stetson.***Aptychopsis prima** Barrande

Litén Beds, L. Sil.-M. Sil.; Borek, Czech.

FIGD: Rolfe, [In press] = **6082**/9. *P. R.*, fig. = **6082**/11.**Canadaspis perfecta** (Walcott) Novojilov *in Orlov*

Burgess Sh., M. Cam.; Field, B. C.

FIGD: Rolfe, [In press]; Raymond, 1935, p. 221 = **5977**/70. *Coll. C. H. Burgess, P. E. Raymond, W. E. Schevill, and H. C. Stetson.***Dictyocaris simoni** Salter

Downtonian, L. Dev.; Stonehaven, Scot.

FIGD: Rolfe, [In press] = **6224**/9b. *Coll. P. E. Raymond and H. C. Stetson.***Hurdia victoria** Walcott

Burgess Sh., M. Cam.; Field, B. C.

FIGD: Rolfe, [In press] = based on **5986**/13a. *Coll. C. H. Burgess, P. E. Raymond, W. E. Schevill, and H. C. Stetson.***Hymenocaris perfecta** WalcottSee *Canadaspis perfecta***Nothozoe pollens** Barrande

Drabov Quartzites, M. Ord.; Mt. Drabov, Czech.

FIGD: Rolfe, [In press] = **6081**/14. *Coll. J. M. von Schary.***Proboscicaris agnosta** Rolfe

Burgess Sh., M. Cam.; Field, B. C.

PARA: Rolfe, 1962e, p. 1, 3, 4, fig. 1 = **5979**/1. P. 1-4, fig. 1 = **5979**/2a/b. P. 1-4, fig. 1 = **5979**/3a/b. *Coll. C. H. Burgess, P. E. Raymond, W. E. Schevill, and H. C. Stetson.*

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